

The Panamanian
Foundation for the
Promotion of Mathematics (FUNDAPROMAT) seeks to change the world's perception so that one and all can experience mathematics as accessible, relevant and inherently joyous.
@fundapromat


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Join our math outreach activities, which are free and open to the general public!

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## JANUARY 2021

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| $29$ |  |  |
| $30$ $\begin{aligned} & \text { 10:00 AM - } \\ & \text { 11:30 AM } \end{aligned}$ |  |  |



## Twenty-Eighth Virtual Origami Class

The twenty-eighth Virtual Origami Class took place on Tuesday, February 2nd, 2021 from 4 pm until 5 pm , with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

Participants began the class by cutting one sheet of $8.5 \times 11$ paper to form a square. David Medina then taught how to fold a jumping frog, which is a traditional origami model. This origami design is appropriate for 8-year-olds and above.


## First Math Webinar in English

The first Math Webinar in English took place on Wednesday, February 3rd, 2021 from 5 pm until 6 pm with Colin Wright, Founder of Solipsys Limited and Organizer of the MathsJam Annual Gathering, as our invited speaker. This virtual event was free and open to the general public. This virtual event was free and open to the general public.

In this first Math Webinar in English, Colin Wright presented on "Colours Can Compute." The speaker began the virtual event by describing the Four Colour Theorem and then shared a few games with colouring maps. Colin Wright connected these colouring maps with the way you arrange networks and ended by showing other applications of this problem on our daily lives.


## Webinar on Playing is a Serious Matter

The Webinar on Playing is a Serious Matter took place on Thursday, February 4th, 2021 from 2 pm until 3:30 pm, with Silvina Naidicz, organizer of workshops of games of ingenuity from Argentina, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker commented on the workshops of games of ingenuity that she organizes in person in Argentina, the type of games that she presents in these workshops and the results that she has observed from her participants. Some of the games of ingenuity that Silvina Naidicz mentioned include the Game of SET, the Rubik's Cube, Chocolate Fix, Swish, Rush Hour, Crazy Bubbles and many more. The speaker also highlighted that playing is one of the best methods to develop a complex brain.


## Webinar on Choreography of a Mathematician

The Webinar on Choreography of a Mathematician took place on Friday, February 5th, 2021 from 12 pm until 1:30 pm, with Dr. Eduardo Mancera, Vice President of the Interamerican Committee on Math Education, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker highlighted that the development of mathematical thinking is a creative act that does not depend on memory or on certain skills, but on continuous inquiry and the approach and the exploration of all types of possibilities. Dr. Eduardo Mancera emphasized that knowing how to use the symbols does not imply the understanding of the mathematics, and that solving a problem is not the end of the math activity, but only the beginning. The speaker also stated that doing mathematics is not only repeating procedures, having good memory, using symbols... Doing mathematics is imagining procedures, making mistakes and fixing them, finding analogies, arguing, using diverse contents, creating paths in one direction and in the opposite...


| $\begin{gathered} \text { 10:00 AM - } \\ \text { 11:30 AM } \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Ves a explorar ta actividad inieractiva 'Tengram' con todo to fomiliol <br>  | Eighth Math Jamboree <br> The eighth Math Jamboree took place on Saturday, February 6th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this eighth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called "Tangram" in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Marleny Vargas for designing this activity for FUNDAPROMAT. You can watch the promotional video of Tangram in Spanish created by Glasswing International here. |
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| $\begin{aligned} & \text { 7:00 PM - } \\ & \text { 7:30 PM } \end{aligned}$ | CAFÉ MATEMÁTICO Con Yamiselle <br> feitar Ires it is wurnede adal worci 700 anathon $\square$ | Math Coffee with Yamiselle <br> The Math Coffee with Yamiselle took place on Monday, February 8th, 2021 from 7 pm until 7:30 pm. The special guest of our first Instagram Live was Yamiselle Diaz, actress, educational psychologist and FUNDAPROMAT volunteer. <br> In this Math Coffee, Yamiselle Diaz told us about her personal story with mathematics, about her favorite FUNDAPROMAT virtual event and about her experience as volunteer in the Math Jamborees organized by FUNDAPROMAT. You can watch the video by visiting our Instagram account: @fundapromat or by clicking here. |
| $\begin{gathered} \text { 4:00 PM - } \\ \text { 5:00 PM } \end{gathered}$ | CLASE DE ORIGAMI <br>  nere $+\cos \boldsymbol{m}$ Miomec tupN\|pi yblecas insortereve an as lus | Twenty-Ninth Virtual Origami Class <br> The twenty-ninth Virtual Origami Class took place on Tuesday, February 9th, 2021 from 4 pm until 5 pm , with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public. <br> Participants began the class by cutting one sheet of $8.5 \times 11$ paper to form a square. Matthew Green then taught how to fold a canoe that floats, which is a traditional origami model. This origami design is appropriate for 8 -year-olds and above. |
| $\begin{gathered} 10 \\ 12: 00 \mathrm{PM}- \\ 1: 00 \mathrm{PM} \end{gathered}$ | Juguemos con Números <br>  <br>  Expontecs: Rull Inesnbele en <br>  | Webinar on Let's Play with Numbers <br> The Webinar on Let's Play with Numbers took place on Wednesday, February 10th, 2021 from 12 pm until 1 pm , with Pura Fornals, President of the Museum of Mathematics of Cataluña (MMACA), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker presented 5 curious games: guess which one is missing, think of a number, number poem, hidden numbers and what are we talking about. Pura Fornals also shared the mathematical secrets behind all the games that she described. This virtual event was co-organized with the Museum of Mathematics of Cataluña (MMACA). |

## FEBRUARY 2021




FEBRUARY - MARCH 2021



## Second Math Webinar in English

The second Math Webinar in English took place on Wednesday, March 3rd, 2021 from 5 pm until 6 pm with Jennifer Quinn, President of the Mathematical Association of America (MAA), as our invited speaker. This virtual event was free and open to the general public. This virtual event was free and open to the general public.

In this second Math Webinar in English, Jennifer Quinn presented on "YOU Belong in Mathematics!" The speaker began the virtual event by showing the results of a Google search on who are mathematicians. Jennifer Quinn also defined that a math person is first a person and second, someone who enjoys mathematics. Doing math is about having authentic conversations about the patterns that we see and being able to communicate what we discover. The speaker also shared several puzzles of "Which One Doesn't Belong?" designed so that any of the four options has a reason to be excluded and highlighted that we should rename these puzzles "What Makes Each of These Unique?"


## Webinar on Poker and Mathematics

The Webinar on Poker and Mathematics took place on Thursday, March 4th, 2021 from 2 pm until 3 pm , with Dr. Gregorio Moreno, Professor of Mathematics at the Pontifical Catholic University of Chile, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by describing how to play poker. Dr. Gregorio Moreno then explained that the areas of mathematics that are related to this card game include game theory, probability and combinatorics. The speaker also shared strategies about when to place a bet and highlighted that in poker, you not only need math knowledge to win but you also need to know psychology since the players must control their emotions and their reactions while playing.


## Webinar on Mathematical Comic

The Webinar on Mathematical Comic took place on Friday, March 5th, 2021 from 12 pm until 1 pm , with Dr. Pedro Martinez, math teacher and creator of the mathematical comic "Mathland," as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by explaining that the purpose of this mathematical comic is to reduce math anxiety on kids, facilitate abstraction, motivate and capture students' attention, and promote reading and the taste for art. The comic tells the story of Alan, who is a young boy who does not like mathematics until one day, he mysteriously finds himself trapped in a magical world called "Mathland" where mathematics is the key to returning home. In his adventure, Alan meets peculiar characters like Zero and the magician Algebra. Dr. Pedro Martinez read a chapter of his comic called Algebra's Challenge, which introduces students to equations. This virtual event was co-organized with the Spanish Mathematical Royal Society (RSME).


## Twelfth Math Jamboree

The twelfth Math Jamboree took place on Saturday, March 6th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.

In this twelfth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called "Watering Orchards" in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Gisela Diaz for designing this activity for FUNDAPROMAT.


## MARCH 2021



## Thirty-Second Virtual Origami Class

The thirty-second Virtual Origami Class took place on Tuesday, March 9th, 2021 from 4 pm until $5: 30 \mathrm{pm}$, with the origami artist Noelia Avila as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed six paper squares with dimensions $12 \mathrm{~cm} \times 12 \mathrm{~cm}$. Noelia Avila then taught how to fold a cube with Sonobe modules. This origami design is appropriate for 8 -yearolds and above.


## Webinar on Egyptian Tangram

The Webinar on Egyptian Tangram took place on Wednesday, March 10th, 2021 from 12 pm until 1 pm , with Carlos Luna, high school math teacher and member of the Museum of Mathematics of Cataluña (MMACA), as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by describing the traditional tangram which consists of 7 pieces. Carlos Luna then presented the Egyptian tangram which consists of 5 pieces and explained why they named it Egyptian. The speaker also shared how the Egyptian tangram can be used by teachers to explore math concepts in the classroom, like geometric shapes, the Pythagorean theorem, Pick's theorem, similar figures, the different types of quadrilaterals, triangular paradoxes and golden rectangles. This virtual event was co-organized with the Museum of Mathematics of Cataluña (MMACA).


## Webinar on Math and Videogames

The Webinar on Math and Videogames took place on Thursday, March 11th, 2021 from 2 pm until 3 pm , with Jorge Mejia, high school math teacher in Mexico, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by pointing out that the purpose of the game of minesweeper which was created in 1998 was to teach computer users the button controls of the mouse. Jorge Mejia also described the videogame of Minecraft and explained about object-oriented programming. The speaker also related the game with sets, functions, graphs and other math concepts.


## Workshop on the Proof of the Pythagorean Theorem with Origami

The Workshop on the Proof of the Pythagorean Theorem with Origami took place on Thursday, March 11th, 2021 from 5 pm until 6 pm, with the origami artist Stella Ricotti from Argentina as our invited speaker. This virtual event was free and open to the general public.

This virtual event was co-organized with the Colombian Society of Mathematics as part of the celebration of the International Day of Mathematics. You can watch the video by visiting the Facebook account of the Colombian Society of Mathematics: @SocColMat.



## MARCH 2021

| 2:00 PM 3:00 PM |  | Webinar on Art, Chance and Musical Games <br> The Webinar on Art, Chance and Musical Games took place on Thursday, March 18th, 2021 from 2 pm until 3 pm , with the musician and composer of games Rodrigo Valla from Argentina, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by explaining what chance is and defining the concept of a random event. Rodrigo Valla then connected chance with painting through the works of art of Joan Mitchell, with photography through his own experiments with a digital camera and some playing cards, and with music through an initiative in which an auditorium simulated a neural network. The speaker also recommended to visit the sites https://rodrigovalla.gitlab.io and https:// rodrigovalla.com to continue exploring these topics. |
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| $\begin{gathered} \text { 12:00 PM }- \\ \text { 1:00 PM } \end{gathered}$ | Juguemos con Palabras <br> Fetha: vernes to de matco de 2021 <br> Horm: $12: 00$ mit <br> ingenbete emi nipesilinyurisonlugoames patabras | Webinar on Let's Play with Words <br> The Webinar on Let's Play with Words took place on Friday, March 19th, 2021 from 12 pm until 1 pm, with Andrea Zablotsky, specialist in word and logic games and Production Manager of Mind Editions. as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by explaining the benefits of solving word games. Andrea Zablotsky then shared several word games including anagrams, multiwords, rebuses, towers, linked words, pizzagrams and many more. The speaker also mentioned several ways in which we can exercise our neurons day by day. |
| $\begin{gathered} \text { 10:00 AM - } \\ \text { 11:30 AM } \end{gathered}$ | JOLGORIO MATEMÁTICO <br> iVen a explerar to activided interective 'Figures Cemelas' cos todo tu familla! <br> Fechal rbbade 20 4e marre de 202: Mora: $10-00$ e.m. isserlbete as: httpa:Ifilinyurlacow f jelgorles | Fourteenth Math Jamboree <br> The fourteenth Math Jamboree took place on Saturday, March 20th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this fourteenth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Twin Figures» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Ramon Martinez for designing this activity for FUNDAPROMAT. |
| $23$ $\begin{aligned} & \text { 7:00 PM - } \\ & \text { 9:00 PM } \end{aligned}$ | Décimo Primer Mathsjam Virtual en Panamá | Eleventh Virtual MathsJam in Panama <br> The eleventh Virtual MathsJam in Panama took place on Tuesday, March 23rd, 2021 from 7 pm until 9 pm . The MathsJam is a monthly opportunity for math enthusiasts who are 18 years and older to share some quality time with like-minded individuals while solving math puzzles and intellectual challenges in a collaborative environment. <br> This virtual event was free and only for adults. Dr. Jeanette Shakalli, Executive Director of FUNDAPROMAT, acted as the moderator. In this event, participants solved different math challenges using their creativity and imagination. |



## ¿Cómo Resolver un Asesinato Utilizando las Matemáticas?


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26 12:00 PM 1:30 PM



## Webinar on How to Solve a Murder Using Mathematics?

The Webinar on How to Solve a Murder Using Mathematics? took place on Friday, March 26th, 2021 from 12 pm until 1:30 pm, with Mucuy-kak Guevara, Professor of Mathematics at the National Autonomous University of Mexico (UNAM), as our invited speaker. This virtual event was free and open to the general public.
The invited speaker started the virtual event by explaining what discrete mathematics is and what graphs are. Mucuy-kak Guevara then described several basic results of graph theory that helped us solve the murder of the Duke of Densmore and discover that it was Apolonia, one of his 8 ex wives, who was responsible for his death. The speaker also shared another example in which graph theory can be applied to help 11 classmates organize their birthday parties. para ayudar a 11 compañeros de escuela a organizar sus fiestas de cumpleaños.


## Fifteenth Math Jamboree

The fifteenth Math Jamboree took place on Saturday, March 27th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.
In this fifteenth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Sprouts» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Camila Espinoza for designing this activity for FUNDAPROMAT, inspired by a presentation given by Ximena Colipan. You can watch the promotional video of Sprouts in Spanish created by Glasswing International here.


## Thirty-Fourth Virtual Origami Class

The thirty-fourth Virtual Origami Class took place on Tuesday, March 30th, 2021 from 4 pm until 5 pm , with the origami artist Karim Talavera as our invited speaker. This virtual event was free and open to the general public.
For this class, participants needed one paper square with dimensions $15 \mathrm{~cm} \times 15 \mathrm{~cm}$. Karim Talavera then taught how to fold a hummingbird, which is a traditional origami model. This origami design is appropriate for 8 -year-olds and above.


## APRIL 2021

| $\begin{gathered} 1 \\ \text { 2:00 PM }- \\ \text { 3:00 PM } \end{gathered}$ | Aprende Geometria Programando con Scratch Fecha: pueves 1 de abort de 2097 Hois 200 pac <br>  | Webinar on Learn Geometry Programming with Scratch <br> The Webinar on Learn Geometry Programming with Scratch took place on Thursday, April 1st, 2021 from 2 pm until 3 pm, with Dr. David Salomon Gomez, National Representative of the Interamerican Committee on Math Education (CIAEM) in Mexico, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by explaining what Scratch, is, how to access it and how to save and share a project. Dr. David Salomon Gomez then described how teachers can use this tool to make their math classes more interactive and fun. The speaker also shared a simple geometric example programming with Scratch. |
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| $\begin{gathered} \text { 12:00 PM } \\ 1: 00 \mathrm{PM} \end{gathered}$ | Los Secretos Detrás de las Estadisticas Deportivas <br>  wher: $1 \geqslant 09$ not fincribere enct | Webinar on the Secrets Behind Sports Statistics <br> The Webinar on the Secrets Behind Sports Statistics took place on Friday, April 2nd, 2021 from 12 pm until 1 pm , with Diego Pokorski, actuary and sports journalist from Argentina, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker shared several examples of data about tennis, soccer, basketball, football and other sports published on TV, radio, newspaper, social media and other communication media. Diego Pokorski then highlighted the importance of confirming the veracity of the sports data and of asking many questions, including who published the data and why. |
| $\begin{aligned} & \text { 10:00 AM - } \\ & \text { 11:30 AM } \end{aligned}$ | JOLGORIO MATEMÁTICO <br> 'Monedes Inguietes' con todo fu famitió | Sixteenth Math Jamboree <br> The sixteenth Math Jamboree took place on Saturday, April 3rd, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this sixteenth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Restless Coins» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Ramon Martinez for designing this activity for FUNDAPROMAT, inspired by the activity "Coin Flipping" created by Sydney Weaver. |
| $\begin{aligned} & \text { 7:00 PM - } \\ & \text { 7:30 PM } \end{aligned}$ | CAFÉ MATEMÁTICO Con Julieta | Math Coffee with Julieta <br> The Math Coffee with Julieta took place on Monday, April 5th, 2021 from 7 pm until 7:30 pm. The special guest of our third Instagram Live was Julieta Parravicini, math teacher and FUNDAPROMAT volunteer. <br> In this Math Coffee, Julieta Parravicini told us about her personal story with mathematics, about her favorite FUNDAPROMAT virtual event and about her experience as volunteer in the Math Jamborees organized by FUNDAPROMAT. You can watch the video by visiting our Instagram account: @ fundapromat or by clicking here. |

APRIL 2021

| $\begin{gathered} 10 \\ 10: 00 \mathrm{AM}- \\ 11: 30 \mathrm{AM} \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Ven a explorar ta actividad interactiva Torres de Bloques ${ }^{*}$ con toda tu famitio | Seventeenth Math Jamboree <br> The seventeenth Math Jamboree took place on Saturday, April 10th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this seventeenth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Stack Blockers» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Sydney Weaver for designing this activity for FUNDAPROMAT and Ramon Martinez and Julieta Parravicini for creating some of the variants. |
| :---: | :---: | :---: |
| 4:00 PM 5:00 PM | CLASE DE ORIGAMI $\qquad$ <br>  $\qquad$ iengonserte $\qquad$ | Thirty-Sixth Virtual Origami Class <br> The thirty-sixth Virtual Origami Class took place on Tuesday, April 13th, 2021 from 4 pm until 5 pm, with the origami artist Jaciara Grzybowski as our invited speaker. This virtual event was free and open to the general public. <br> For this class, participants needed eight paper squares of $10 \mathrm{~cm} \times 10 \mathrm{~cm}$ and glue. Jaciara Grzybowski then taught how to fold a VEGANAT snowflake, which is a model created by the speaker herself. This origami design is appropriate for 8 -year-olds and above. |
| $\begin{gathered} 1 \boldsymbol{4} \\ \text { 12:00 PM }- \\ \text { 1:00 PM } \end{gathered}$ | Descubriendo Matemáticas de Película | Webinar on Discovering the Mathematics of Movies <br> The Webinar on Discovering the Mathematics of Movies took place on Wednesday, April 14th, 2021 from 12 pm until 1 pm , with David Pinyol, Professor of Mathematics at the Obert Institute of Cataluña and member of the Museum of Mathematics of Cataluña (MMACA), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker presented fragments of several movies to reveal some tricks and amazing people related to mathematics. Some of the movies that David Pinyol mentioned include Hidden Figures, Shakuntala Devi, Fermat's Room, Super 30, Agora, Measuring the World, The Man Who Knew Infinity and A Beautiful Mind. The speaker also highlighted the winners of the Mental Calculation World Cup. This virtual event was co-organized with the Museum of Mathematics of Cataluña (MMACA). |
| $\begin{aligned} & \text { 2:00 PM } \\ & \text { 3:00 PM } \end{aligned}$ |  | Webinar on Dominoes to Learn Mathematics <br> The Webinar on Dominoes to Learn Mathematics took place on Thursday, April 15th, 2021 from 2 pm until 3 pm , with Jose Chamoso, Professor of Didactics of Mathematics at the University of Salamanca in Spain, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by presenting the gaming pieces and the rules of the traditional game of dominoes. Jose Chamoso then shared many fun math activities that can be done using dominoes, including searching for patterns, memory, performing operations, bridges, magic squares, the induction principle, construction of geometric bodies and much more. The speaker also highlighted that these activities can be used in kinder, elementary school, high school and university levels and in teacher training. |



## APRIL 2021



## Matemagia con Barajas

## 24

2:00 PM
3:00 PM


## Webinar on John Conway's Game of Life

The Webinar on John Conway's Game of Life took place on Thursday, April 22nd, 2021 from 2 pm until 3 pm , with Julia Maristany from Argentina, PhD student in Biophysics at the University of Cambridge in England, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by sharing the story of the English mathematician John Conway and anecdotes of his personal and professional life. Julia Maristany then described the four rules of the Game of Life, which is a game invented by John Conway that has no players. The speaker showed several examples of static, oscillating and sliding patterns with different initial configurations of the game. Julia Maristany explained that this game is a universal computer, that is it is believed that we can simulate anything with the Game of Life. The speaker also highlighted that the celullar automata are used to describe patterns that appear in nature and to create technology.


## Webinar on Doing Mathemagic

The Webinar on Doing Mathemagic took place on Friday, April 23rd, 2021 from 12 pm until 1 pm, with Marcelo Toledo, Teacher at the National School of Monserrat - National University of Cordoba in Argentina, better known as Prof. Toleinstein, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by showing how we can make a hole in a sheet of paper through which a person can go through. Prof. Toleinstein then presented four magic tricks with playing cards: a trick with binary code, another trick related to water and oil, a third one that uses the Australian shuffle to find the thief, and the last trick to find the partner. The speaker also emphasized that with a bit of practice, we can all become mathemagicians.


## Nineteenth Math Jamboree

The nineteenth Math Jamboree took place on Saturday, April 24th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.
In this nineteenth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «umping Crickets» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Gisela Diaz and Romina Busain for designing this activity for FUNDAPROMAT.


## Webinar on Mathemagic with Cards

The Webinar on Mathemagic with Cards took place on Saturday, April 24th, 2021 from 2 pm until 3 pm , with the mathemagician Sergio Fernandez from Colombia, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker performed 4 fascinating magic card tricks based on math concepts, surprising the audience. The mathemagician Sergio Fernandez then explained the mathematics behind some of the tricks that he performed, including the concept of parity and the inverted order of the playing cards. The speaker also recommended the blog of the mathemagician Sergio Belmonte to all those who are curious and want to learn how to do mathemagic. This virtual event was co-organized with the Explora Center of Sciences and Art.


| $27$ <br> 4:00 PM 5:00 PM | CLASE DE ORIGAMI <br> Feher menten zi Sr mbel to 2081 Wen: +00 an Merem eipect y+1/em: Itsurbett en © IVk: <br>  | Thirty-Seventh Virtual Origami Class <br> The thirty-seventh Virtual Origami Class took place on Tuesday, April 27th, 2021 from 4 pm until 5 pm , with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public. <br> For this class, participants needed one sheet of $8.5 \times 11$ paper which they cut to form a square. Matthew Green then taught how to fold a heart, which is a model created by Hiroshi Kumasaka. This origami design is appropriate for 8 -year-olds and above. |
| :---: | :---: | :---: |
| $\begin{gathered} \text { 2:00 PM - } \\ \text { 3:00 PM } \end{gathered}$ | Juegos y Enigmas Curiosos <br> Facha: jueves 29 de sbril do 2021 Hors: $2000 \mathrm{p.m}$. <br> iesoribete enc bttps:/inyuar comjaogos eoigmes | Webinar on Curious Games and Enigmas <br> The Webinar on Curious Games and Enigmas took place on Thursday, April 29th, 2021 from 2 pm until 3 pm , with Pablo Peralta, industrial engineer from Argentina specialized in data science, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker presented math challenges, as well as puzzles of sequences, of matches, of equalities, of lateral thinking, of operations, of magic squares and of cryptograms. The participants enjoyed solving these curious games and enigmas so much that we will be inviting Pablo Peralta again for another virtual event with more puzzles. |
| 30 <br> 12:00 PM - <br> 1:00 PM | La Matemática Recreativa como Herramienta para la Ensen̂anza <br> Fecha; viprese 39 de abril de 2021 Horat 1200 mad <br> linteribete enckinpt inimurLebw/mate rac <br> txpesiters Caimat Qinvifo <br> 403 <br> Runchmomat <br> Wabinuria gratis ahiertery is matiles. | Webinar on Recreational Mathematics as a Teaching Tool <br> The Webinar on Recreational Mathematics as a Teaching Tool took place on Friday, April 30th, 2021 from 12 pm until 1 pm , as our invited speaker. Carmen Giraldo, founding member of the Museum of Mathematics of the Federal University of Minas Gerais (UFMG) in Brazil, This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by defining what we refer to as recreational mathematics. Dr. Carmen Giraldo then shared how games have been the source of many mathematical models, like for example the game of Hex, the kaleidocycle, the Rubik's Cube, flexagons and the Soma Cube. The speaker also described the Dragon's Spell, the puzzle "From the Square to Sam Lloyd's Cross" and Henry Perigal's dissection to prove the Pythagorean Theorem. |

## MAY 2021



## Webinar on Discovering the Magic of Mathematics

The Webinar on Discovering the Magic of Mathematics took place on Thursday, May 6th, 2021 from 2 pm until 3 pm , with the mathemagician Francisco Gonzalez, winner of the third prize of mentalism in the National Congress of Magic of Valencia in Spain, as our invited speaker. This virtual event was free and open to the general public.. This virtual event was free and open to the general public.

The invited speaker performed four mathemagic tricks: one about emoticons based on the concept of parity, another about sticks with numbers that involve the rapid sum of numbers of several digits, the third about arithmetic progressions and the last one about colored envelopes. Francisco Gonzalez also recommended his book called "Mathemagic, Discover the Magic of Mathematics" for all those who are curious and want to explore more tricks.


Webinar on How to Win One Million Dollars Doing Origami?
The Webinar on How to Win One Million Dollars Doing Origami? took place on Friday, May 7th, 2021 from 12 pm until 1 pm , as our invited speaker. Julie Decaup, postdoc in mathematics in the Cuernavaca Unit of the Institute of Mathematics of the National Autonomous University of Mexico (UNAM), This virtual event was free and open to the general public.

The invited speaker explained that the fold map of an origami is formed when we fold an origami design and open the paper square back again. Dr. Julie Decaup described what it means for an origami to be foldable or not and shared the basic criteria of foldable origamis. The speaker also presented how the P vs NP problem is related to origami, which is one of the millennium problems that whoever solves it will win one million dollars.


## Twenty-First Math Jamboree

The twenty-first Math Jamboree took place on Saturday, May 8th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.

In this twenty-first Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Space Invaders» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Camila Espinoza for designing this activity for FUNDAPROMAT, inspired by a presentation given by Ximena Colipan.


## Thirty-Ninth Virtual Origami Class

The thirty-ninth Virtual Origami Class took place on Tuesday, May 11th, 2021 from 4 pm until 5 pm , with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed two paper squares, one $15 \mathrm{~cm} \times 15 \mathrm{~cm}$ and the second one $6 \mathrm{~cm} \times 6$ cm . David Medina then taught how to fold a fractal flower, which is a traditional origami model. This origami design is appropriate for 8 -year-olds and above.


## MAY 2021



## Celebration of the International Day for Women in Mathematics 2021

The Celebration of the International Day for Women in Mathematics 2021 took place on Wednesday, May 12th, 2021 from 12 pm until 1:30 pm with Carmen de Paz, Andrea Zablotsky and Caroline Ainslie as our invited speakers. Carmen de Paz performed mathemagic tricks with dice, Andrea Zablotsky shared fun word games and Caroline Ainslie connected math with soap bubbles and balloons. This virtual event was free and open to the general public.

And why May 12th? Maryam Mirzakhani (1977-2017) became the first woman to receive the Fields Medal in 2014. The Fields Medal is the most prestigious award given by the international math community, equivalent to the Nobel Prize in Mathematics. On May 12th, her birthday, we celebrate the International Day for Women in Mathematics. This celebration began when on July 31st, 2018, the Women's Committee of the Iranian Mathematical Society presented to the participants of the World Meeting for Women in Mathematics a proposal to celebrate women in mathematics on May 12th, and the proposal was approved. May 12th, 2019 was the first official celebration of the International Day for Women in Mathematics. For more information on this celebration, visit the website: https://may12.womeninmaths.org.


## Webinar on How to Battle a Zombie Invasion?

The Webinar on How to Battle a Zombie Invasion? took place on Thursday, May 13th, 2021 from 2 pm until 3 pm, with Constanza Sanchez, Professor of Mathematics at the University of Buenos Aires in Argentina, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by presenting the following scenario: suppose that at the beginning, there are 1000 humans and 20 zombies. After one year, suppose that there are 900 humans left and 120 zombies. Constanza Sanchez then created mathematical models according to different scenarios, taking into consideration different variables, such as the capacity of the humans to defend themselves against the zombies and the effectiveness of the zombies to infect the humans. The speaker also explained how these mathematical models are used to predict the spread of infectious diseases.


Twenty-Second Virtual Encounter with Outstanding Mathematicians
The twenty-second Virtual Encounter with Outstanding Mathematicians took place on Friday, May 14th, 2021 from 12 pm until 1 pm. as our invited speaker. Ana Romero, Professor at the University of La Rioja in Spain, was our invited speaker. This virtual event was free and open to the general public.

On this twenty-second Encounter, Dr. Ana Romero shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "The Mathematics Behind the Animated Movies," in which she explained that geometric modeling consists of constructing and representing objects of three dimensions in a computer. The speaker also described other techniques like polygonal meshes, interpolation, approximation, constructive models, 3D reconstruction and photogrammetry. Dr. Ana Romero showed several examples like Woody from the Toy Story movie, Joy from the Inside Out movie and Yoda from the Star Wars movie.


## Twenty-Second Math Jamboree

The twenty-second Math Jamboree took place on Saturday, May 15th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.

In this twenty-second Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Which One Doesn't Belong?» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT, inspired by a presentation given by Dr Jennifer Quinn, President of the Mathematical Association of America (MAA).




| $\begin{gathered} 7 \\ \text { 2:00 PM } \\ \text { 3:00 PM } \end{gathered}$ | Juegos y Desafios Matemáticos para Jugar en Familia | Webinar on Math Games and Challenges to Play with Your Family <br> The Webinar on Math Games and Challenges to Play with Your Family took place on Thursday, May 27th, 2021 from 2 pm until 3 pm , as our invited speaker. Ximena Colipan, Professor of Mathematics at the University of Talca in Chile, This virtual event was free and open to the general public. <br> The invited speaker shared several games of strategy like the Game of Nim, Reversi and Lady on Cross. Dr. Ximena Colipan then presented several games using math notions for the little ones, like Number Salad, Sim and Stop! The speaker also highlighted Samuel Lloyd, Henry Dudeney, Charles Bouton, John Conway and Martin Gardner, specialists on recreational mathematics. This virtual event was co-organized with the Society of Mathematics of Chile (SOMACHI). |
| :---: | :---: | :---: |
| $\begin{gathered} ? 8 \\ \text { 12:00 PM } \\ 1: 00 \mathrm{PM} \end{gathered}$ | ¿Existe Alguna Manera de Dividir Tesoros de Forma Justa y Evitando la Envidia? <br> Feebs! verees 26 de mayo de 2021 Hora: 12:09 mis <br> inscribete erc himes ruphat com/diedirtesoros | Webinar on Does There Exist a Way to Divide Treasures Fairly and Avoiding Envy? <br> The Webinar on Does There Exist a Way to Divide Treasures Fairly and Avoiding Envy? took place on Friday, May 28th, 2021 from 12 pm until 1 pm, as our invited speaker. Deborah Oliveros, Professor of Mathematics at the National Autonomous University of Mexico (UNAM), This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by defining what fair division is and how we can classify what we want to divide. Dr. Deborah Oliveros then showed a method on how to divide a cake between two people fairly and free of envy. The speaker also presented the Dubins-Spanier method of dividing a cake between 4 people fairly but not free of envy and the Selfridge-Conway method of dividing a cake between 3 people that is free of envy. Dr. Deborah Oliveros ended with an example on how to divide belongings (for example, a car, a house, a dog...) between 4 people. |
| $\begin{gathered} ? \\ \text { 10:00 AM }- \\ \text { 11:30 AM } \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Ven e explorer le actwidod interactiva -Et Juego de SET cos toda fu familiat <br> Fechat sollabe 29 de mayo de 2021 Heret 10:09 a. n inseribete in 26jolgorio | Twenty-Fourth Math Jamboree <br> The twenty-fourth Math Jamboree took place on Saturday, May 29th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this twenty-fourth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «The Game of SET» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT, inspired by a presentation given by Dr Julia Plavnik. |



## Forty-First Virtual Origami Class

The forty-first Virtual Origami Class took place on Tuesday, June 1st, 2021 from 4 pm until 5:30 pm, with the origami artist Ricardo Hinojosa as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one paper square of dimensions $15 \mathrm{~cm} \times 15 \mathrm{~cm}$ and scissors to form a pentagon. Ricardo Hinojosa then taught how to fold a pentagonal star, which is an origami model created by Toshie Takahama. This origami design is appropriate for 8 -year-olds and above.


## Fifth Math Webinar in English

The fifth Math Webinar in English took place on Wednesday, June 2nd, 2021 from 5 pm until 6 pm with James Tanton, Mathematician-at-Large of the A Mathematical Association of America ((MAA) and co-Founder of The Global Math Project. This virtual event was free and open to the general public.

In this fifth Math Webinar in English, James Tanton presented on "How to Fold Things into Thirds, and Thirty-Thirds, and Three-Hundred-and-Thirty Thirds!" The speaker started the virtual event with the International Math Salute. James Tanton presented a method to fold a tie into thirds and then explained how to fold the tie to get different fractions ( $1 / 3,1 / 7$ and 19/37). The speaker highlighted how special these numbers are. Through this experiment of tie folding, James Tanton reached Artin's Conjecture, which is an unsolved math problem.


## Webinar on Games of the Math Fair of Zacatecas

The Webinar on Games of the Math Fair of Zacatecas took place on Thursday, June 3rd, 2021 from 2 pm until 3 pm, with Emma Gonzalez, teacher of the E.S.L. Guadalupe School in Zacatecas, Mexico, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker presented 3 games that they play in the Math Fair: the Game of 31, Guess Numbers, that uses the binary system, and Connect 9 Dots, first with 3 straight lines and then with 4 lines. Emma Gonzalez also invited several kids to the virtual event, who shared their experience attending the Math Fair of Zacatecas.


## Webinar on Let's Play with Cards

The Webinar on Let's Play with Cards took place on Friday, June 4th, 2021 from 12 pm until 1:30 pm, with Juli Garbulsky, student of Data Science at the University of Buenos Aires in Argentina, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker shared two fun card games: the Game of 15 in 3, which turned out to be equivalent to the popular game of Tic Tac Toe, and a game of cards ordered in a line, whose trick involves blue cards and red cards. Juli Garbulsy also explained the winning strategy of both card games that he presented.



## JUNE 2021



## Webinar on Playful Squares

The Webinar on Playful Squares took place on Wednesday, June 9th, 2021 from 12 pm until 1 pm , with Guido Ramellini, advisor to the Museum of Mathematics of Cataluña (MMACA), as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by presenting on Latin squares and Greco-Latin squares. Guido Ramellini then described the magic squares and the tragic squares, which are those in which the same value of the sums of the rows, columns and diagonals is not repeated. The speaker also explained the Game of Skyscrapers and invited all the participants to play. This virtual event was co-organized with the Museum of Mathematics of Cataluña (MMACA).


## Webinar on Curves of Persecution: Catch Me If You Can!

The Webinar on Curves of Persecution: Catch Me If You Can! took place on Thursday, June 10th, 2021 from 2 pm until 3 pm , with Dr. Hector Chaparro, teacher in the Department of Mathematics at the Nueva Granada Military University in Colombia, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by defining what curves of persecution are and where we can find them. Dr. Hector Chaparro then presented the problem of the pirate ship and the merchant vessel and the problem of the four insects. The speaker also shared the applications of these problems in other disciplines.


## Twenty-Third Virtual Encounter with Outstanding Mathematicians

The twenty-third Virtual Encounter with Outstanding Mathematicians took place on Friday, June 11th, 2021 from 12 pm until 1 pm with Dr. Maria Garcia Monera, Professor of Mathematics at the University of Valencia in Spain, as our invited speaker.

On this twenty-third Encounter, Dr. Maria Garcia Monera shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "If You Imagine It, You Can Do It: Art and Geometry in 3D," in which she explained that the idea of building models of surfaces using cardboard is quite ancient. The speaker mentioned that the mathematician Felix Klein (1849-1925) used real models of surfaces made with cardboard to help his students visualize geometric properties. Dr. Maria Garcia Monera encouraged all the participants to visit the website https://www.uv.es/monera2 and build their own models.


## Twenty-Sixth Math Jamboree

The twenty-sixth Math Jamboree took place on Saturday, June 12th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.

In this twenty-sixth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «The Greedy Rabbit» e in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Marleny Vargas for designing this activity for FUNDAPROMAT.


## JUNE 2021




## Fourteenth Virtual MathsJam in Panama

The fourteenth Virtual MathsJam in Panama took place on Tuesday, June 22nd, 2021 from 5 pm until 7 pm . The MathsJam is a monthly opportunity for math enthusiasts who are 18 years and older to share some quality time with like-minded individuals while solving math puzzles and intellectual challenges in a collaborative environment.

This virtual event was free and only for adults. Dr. Jeanette Shakalli, Executive Director of FUNDAPROMAT, acted as the moderator. In this event, participants solved different math challenges using their creativity and imagination.



## Celebrate Mathematics with FUNDAPROMAT in the National Congress of Science and Technology of Panama 2021

The special event "Celebrate Mathematics with FUNDAPROMAT in the National Congress of Science and Technology of Panama 2021" took place on Wednesday, June 23rd, 2021 from 5 pm until 7 pm , with Andres Rieznik, Clara Grima and Tiago Hirth, as our invited speakers. This virtual event was free and open to the general public.
The math communicator Clara Grima from Spain talked about her fun blog for kids "Mati and her Math Adventures" and how this wonderful project was born. Those who are interested can visit the blog here. Then the mathemagician Tiago Hirth from Portugal performed several fascinating mathemagic tricks with playing cards, rubber bands, ropes and more, which amazed both kids and adults alike. Finally, the mathemagician Andres Rieznik from Argentina presented a fragment of his incredible show of mathemagic humor, in which he squared numbers of up to 4 digits faster than a calculator, indicated the day of the week a person was born by only knowing their date of birth and created a magic square in seconds.




## Webinar on Euler and Origami

The Webinar on Euler and Origami took place on Thursday, June 24th, 2021 from 2 pm until 3 pm, with the origami artist Ricardo Hinojosa as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by defining what modular origami is and explained that there are 3 different types of modular origami for polyhedra: those in which the modules represent the faces of the polyhedra, those in which the modules represent the edges and those in which the modules represent the vertices. Ricardo Hinojosa then described Euler's formula, which states that the number of faces - the number of edges + the number of vertices $=2$, and indicated how this formula can help us calculate how many modules we will need to fold a modular origami.


## Webinar on Math Walk

The Webinar on Math Walk took place on Friday, June 25th, 2021 from 12 pm until 1 pm, with Roberto Vignolo, Professor at the National Technological University (UTN) in Argentina, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker shared the story of how the Math Walk was born, which is a permanent space, with free, self-guided and open access, that is found inside the Santa Fe Regional Faculty of the National Technological University (UTN) in Argentina. Roberto Vignolo described several of the interactive and dynamic mockups that can be found in this space, whose purpose is to show math in a didactic and motivating way through appealing toys created by the speaker himself.


## Twenty-Eighth Math Jamboree

The twenty-eighth Math Jamboree took place on Saturday, June 26th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.

In this twenty-eighth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Matchstick Puzzles» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Pablo Peralta for designing this activity for FUNDAPROMAT.


## Forty-Fourth Virtual Origami Class

The forty-fourth Virtual Origami Class took place on Tuesday, June 29th, 2021 from 4 pm until 5 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed a paper rectangle with a special art that was sent by email to print and cut before class. David Medina then taught how to fold a FUNDAPROMAT polo. This origami design is appropriate for 8 -year-olds and above.



## Webinar on Diagnostics and Practical Interventions for Dyscalculia

The Webinar on Diagnostics and Practical Interventions for Dyscalculia took place on Thursday, July 1st, 2021 from 2 pm until 3:30 pm, as our invited speaker. with Dr. Silvia Renata, Director of NeuroEduca. This virtual event was free and open to the general public.

The invited speaker started the virtual event by explaining that dyscalculia is a disability resulting in difficulty learning mathematics that has a biological origin. Dr. Silvia Renata clarified that the specialists that diagnose and treat dyscalculia are psychopedagogues, educational psychologists or neuropsychologists. The speaker also indicated that having dyscalculia results in emotional consequences and in mathematical anxiety that must be treated. Dr. Silvia Renata mentioned that once dyscalculia is diagnosed, the specialist designs a plan of intervention depending on the profile of the person, which includes the use of stimulation activities in the development of mathematical skills.


## Webinar on Music and Symmetry

The Webinar on Music and Symmetry took place on Friday, July 2nd, 2021 from 12 pm until 1:30 pm, as our invited speaker. with Dr. Carlota Simoes, Professor at the University of Coimbra in Portugal and member of the Board of Directors of the International Day of Mathematics (IDM). This virtual event was free and open to the general public.

The invited speaker presented on the connections between music and mathematics, in particular on musical symmetries. Dr. Carlota Simoes shared several examples of musical compositions of Bach, Mozart, among other great composers. The speaker also showed examples of musical compositions in movies like Toy Story, Star Wars, Lion King, West Side Story and many more.


## Webinar on Infinity, Fractals and Turtles

The Webinar on Infinity, Fractals and Turtles took place on Friday, July 2nd, 2021 from 5 pm until 6 pm, with Marco Antonio Figueroa, member of the Matemorfosis outreach group of the Math Research Center (CIMAT) in Guanajuato, Mexico, and member of the organizing committee of the Mexican Math Olympics, as our invited speaker. This virtual event was free and open to the general public.

The invited speaker started the virtual event by explaining what infinity is. Marco Antonio Figueroa then described what fractals are and mentioned several examples of fractals, like the Sierpinski fractals. The speaker also presented a paradox with infinity, Hilbert's infinite hotel and Zeno's paradox on the race between Achilles and the tortoise. This virtual event was co-organized with the Mexican Mathematical Society (SMM).


## Twenty-Ninth Math Jamboree

The twenty-ninth Math Jamboree took place on Saturday, July 3rd, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.
In this twenty-ninth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Flipping Crepes»in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Sergio Mendoza for designing this activity for FUNDAPROMAT.




## Twenty-Fourth Virtual Encounter with Outstanding Mathematicians

The twenty-fourth Virtual Encounter with Outstanding Mathematicians took place on Friday, July 9th, 2021 from 12 pm until 1 pm . as our invited speaker. Adriana Sanchez, Professor and Researcher at the University of Costa Rica, This virtual event was free and open to the general public.

On this twenty-fourth Encounter, Dr. Adriana Sanchez shared anecdotes of her personal life and her professional journey as a female mathematician, in which she highlighted that studying mathematics gave her the opportunity to travel to many different countries like France, Croatia and even India. The speaker also presented on "Fractals in Nature," in which she shared examples of fractals in food, in leaves, in flowers, in animals, in trees, in lightning, in rivers, in mountains, in our bronchi, in our neurons and in our veins. Dr. Adriana Sanchez then described the Julia Set, the Mandelbrot Set, the Sierpinski Triangle, the Sierpinski Carpet and the Koch Snowflake. The speaker also showed several applications of fractals, such as in landscape modeling, in telecommunications and in fashion.


## Thirtieth Math Jamboree

The thirtieth Math Jamboree took place on Saturday, July 10th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.

In this thirtieth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Number Games» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Pablo Peralta for designing this activity for FUNDAPROMAT.


## Forty-Sixth Virtual Origami Class

The forty-sixth Virtual Origami Class took place on Tuesday, July 13th, 2021 from 4 pm until 5:30 pm, with the origami artist Jaciara Grzybowski as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed eight paper squares of $10 \mathrm{~cm} \times 10 \mathrm{~cm}$ and glue. Jaciara Grzybowski then taught how to fold a BOOM snowflake, which is a model created by the speaker herself. This origami design is appropriate for 8 -year-olds and above.


## Webinar on A Walk Through Cryptography

The Webinar on A Walk Through Cryptography took place on Wednesday, July 14th, 2021 from 12 pm until 1:30 pm, with Pura Fornals, President of the Museum of Mathematics of Cataluña (MMACA), as our invited speaker. This virtual event was free and open to the general public.
The invited speaker explained that cryptography is an area of mathematics that deals with encrypting (hiding) and decrypting messages. Pura Fornals showed several examples of how to hide the message inside a text, twist the message, invent alphabets and disorder the message with a key word. The speaker also described the Spartan scytale, the Caesar cipher, the rotating circles, the substitution encryption, the symbol cipher and the enigma machine. This virtual event was co-organized with the Museum of Mathematics of Cataluña (MMACA).




| 12:00 PM 1:00 PM | ¿Cómo Ganar Apuestas Utilizando las Matemáticas? <br> Feche: vernes 23 de jubo de 2021 Hore: $12: 00$ mad <br> Inscribete ent hitperitimyuricom'spuestes mate | Webinar on How to Win Bets Using Mathematics? <br> Webinar on How to Win Bets Using Mathematics? took place on Friday, July 23rd, 2021 from 12 pm until 1 pm , as our invited speaker. Zeidy Barraza, teacher at the Tecmilenio University in Mexico, This virtual event was free and open to the general public. <br> The invited speaker presented several different situations and in each case, analyzed if it is in our best interest to place a bet or not. Dr. Zeidy Barraza then explained the concept of expected value and what it means for a game to be fair or not. The speaker also mentioned that even though in casinos the games are set up so that we will most likely lose, the fairest game is the roulette. |
| :---: | :---: | :---: |
| $\begin{gathered} ? ム \\ \text { 10:00 AM } \\ 11: 30 \mathrm{AM} \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Ven e explorer la actividod interactive "hates de secuencies' coo tosa tu fomilial $\text { Pecha: } 34 b a s o \text {. } 24 \text { de }$ $j 4100462021$ $\text { Here: } 10: 05 \text { a } \mathrm{m} .$ inacribete en: | Thirty-Second Math Jamboree <br> The thirty-second Math Jamboree took place on Saturday, July 24th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this thirty-second Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Sequence Puzzles» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Pablo Peralta for designing this activity for FUNDAPROMAT. |
| $27$ <br> 4:00 PM 5:30 PM |  | Forty-Seventh Virtual Origami Class <br> The forty-seventh Virtual Origami Class took place on Tuesday, July 27th, 2021 from 4 pm until 5:30 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public. <br> For this class, participants needed six paper squares of 10 cm x 10 cm , scissors, a pencil and glue. David Medina then taught how to fold a cockade fan, which is a traditional origami model. This origami design is appropriate for 8 -year-olds and above. |
| 2:00 PM 3:00 PM |  | Webinar on Puzzles to Enjoy Mathematics <br> The Webinar on Puzzles to Enjoy Mathematics took place on Thursday, July 29th, 2021 from 2 pm until 3 pm, with Yolanda Serres Voisin, President of the Venezuelan Association of Math Education (ASOVEMAT), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker presented several puzzles to improve mental calculation. Yolanda Serres Voisin then showed various puzzles to improve geometric thinking and others to improve algebraic reasoning. The speaker highlighted that playing with mathematics improves communication, strengthens reasoning and opens the mind to discover different ways to solve the same puzzle. This virtual event was co-organized with the Venezuelan Association of Math Education (ASOVEMAT). |



## Webinar on The Mathematics of Literature

The Webinar on The Mathematics of Literature took place on Friday, July 30th, 2021 from 12 pm until 1 pm, as our invited speaker. with Dr. Marta Macho-Stadler, Professor of Mathematics at the University of the Basque Country in Spain, This virtual event was free and open to the general public.

The invited speaker shared several examples of mathematics in literary works, such as in "The Planet of the Apes" by Pierre Boulle, "Marius" by Marcel Pagnol, "Gulliver's Travels" by Jonathan Swift, "The Mysterious Island" by Jules Verne and "The Gold-Bug" by Edgar Allan Poe. Dr. Marta Macho-Stadler also presented on sestinas, which is a poetic composition created by the Provencal troubadour Arnaut Daniel. The speaker ended the virtual event by highlighting the "Binary Poem" by Jacques Roubaud.


## Thirty-Third Math Jamboree

The thirty-third Math Jamboree took place on Saturday, July 31st, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event.

In this thirty-third Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Playful Frogs» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Gisela Diaz and Romina Busain for designing this activity for FUNDAPROMAT.


## Math Coffee with Camila

The Math Coffee with Camila took place on Monday, August 2nd, 2021 from 7 pm until 7:30 pm. The special guest of our seventh Instagram Live was Camila Espinoza, math teacher and FUNDAPROMAT volunteer.

In this Math Coffee, Camila Espinoza told us about her personal story with mathematics, about her favorite FUNDAPROMAT virtual event and about her experience as volunteer in the Math Jamborees organized by FUNDAPROMAT. You can watch the video by visiting our Instagram account: @fundapromat or by clicking here.


## Forty-Eighth Virtual Origami Class

The forty-eighth Virtual Origami Class took place on Tuesday, August 3rd, 2021 from 4 pm until 5 pm, with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public.

For this class, participants needed one $15 \mathrm{~cm} \times 15 \mathrm{~cm}$ paper square. ]Matthew Green then taught how to fold a pinwheel, which is a traditional origami model. Using the pinwheel as a base, we also learned how to fold a birdie. These origami designs are appropriate for 8-year-olds and above.



## AUGUST 2021



## AUGUST 2021



| 12:00 PM 2:00 PM | TALLER DE GEOGEBRA <br>  Hew. <br>  iknothtaía ne bupevikiof terfenes gnopeligitalter 44 | GeoGebra Workshop <br> The GeoGebra Workshop took place on Friday, August 27th, 2021 from 12 pm until 2 pm, with Karina Rizzo, Creator of the FotoGebra Competition and Professor of Mathematics at High School Education and Teacher Training Institutes in Argentina, as our invited speaker. This virtual event was free and open to the general public. <br> In this workshop, we learned diverse possibilities that GeoGebra offers to work on math modeling through the use of images. Then we explored different tools offered to the user and we saw several examples of math modeling. Karina Rizzo also shared various activities of exploration through GeoGebra Classroom. |
| :---: | :---: | :---: |
| $\begin{gathered} \text { 10:00 AM - } \\ \text { 11:30 AM } \end{gathered}$ | JOLGORIO MATEMÁTICO <br> IVee e explorer la octividod interactive Fortuna Motematice' con toda tu familiol <br> Fecha: sobaco 25 de ayesro de 2021 Mora: 10:00 $\mathrm{e} . \mathrm{m}$. inscribete esi Attpa:/finyuricomi jolgatioli $4$ | Thirty-Seventh Math Jamboree <br> The thirty-seventh Math Jamboree took place on Saturday, August 28th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this thirty-seventh Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Math Fortune» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. This virtual event was free and open to the general public. We thank Sergio Mendoza and Marleny Vargas for designing this activity for FUNDAPROMAT. |
| 31 | CLASE DE ORIGAMI <br>  Nover a et of en enervi eitaty Meteiterer vel conserolo is ctral is $15 \mathrm{rmas}+13 \mathrm{mp}$ marleter en at trater | Virtual Origami Class \#51 <br> The Virtual Origami Class \#51 took place on Tuesday, August 31st, 2021 from 4 pm until 5 pm, with the origami artist David Medina as our invited speaker. This virtual event was free and open to the general public. <br> For this class, participants needed one paper square of $15 \mathrm{~cm} \times 15 \mathrm{~cm}$. David Medina then taught how to fold a Mandalorian Helmet from Star Wars, which is an origami model created by Aronny Pivaral. This origami design is appropriate for 8 -year-olds and above. |
| $\begin{gathered} \text { 4:00 PM - } \\ \text { 5:00 PM } \end{gathered}$ |  |  |

## SEPTEMBER 2021

| 5:00 PM - 6:00 PM | MATHEMATICAL GEMS FROM MATH HORIZONS $\qquad$ A soen in the geversl pudect on ans pem hangmamise s anisify 4 RUNDAFPIONANT benicy lichionebn | Eighth Math Webinar in English <br> The eighth Math Webinar in English took place on Wednesday, September 1st, 2021 from 5 pm until 6 pm with Deanna Haunsperger, Professor of Mathematics at Carleton College in the United States, This virtual event was free and open to the general public. <br> In this eighth Math Webinar in English, Deanna Haunsperger presented on "Mathematical Gems from Math Horizons." The speaker explained that Math Horizons is a magazine published by the Mathematical Association of America (MAA) with the purpose of introducing undergraduate students to the world of mathematics outside the classroom. Deanna Haunsperger described several interesting articles that appeared in the first 10 years of the magazine. |
| :---: | :---: | :---: |
| $\begin{gathered} ? \\ \text { 2:00 PM }- \\ \text { 3:00 PM } \end{gathered}$ | Dominó, Puentes y Un Jardinero Mechac jatwod 2 de teptiembre de 302 Hora: $2: 00$ pm. <br> Inscribete en: hetpetilinyurl com/domine-jandinero | Webinar on Dominoes, Bridges and a Gardener <br> The Webinar on Dominoes, Bridges and a Gardener took place on Thursday, September 2nd, 2021 from 2 pm until 3 pm , with Laura Pastrana, Professor of Mathematics at the National Autonomous University of Mexico (UNAM), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by telling how two kids made constructions in the videogame Minecraft where they moved between houses through bridges that they could cross only once Laura Pastrana then modeled this example mathematically and related it to the works of Leonhard Euler that became the origin of graph theory. The speaker also presented on a judge who used this same idea to analyze the statement of a gardener accused of murder. Finally, Laura Pastrana shared how it is possible to link all the dominoes following the rules of the game, explaining when it is possible to do so and when it is not. |
| $\begin{gathered} \text { 12:00 PM - } \\ \text { 1:00 PM } \end{gathered}$ | LAS MATEMÁTICAS dEL SUEÑO <br> Fecha: visrnet 3 6e sponierbre de 2021 Hore: 1200 ma. linscribele encititpacitiverticonimate sueng | Webinar on The Mathematics of Sleep <br> The Webinar on The Mathematics of Sleep took place on Friday, September 3rd, 2021 from 12 pm until 1 pm , with Alicia Prieto Langarica, Professor of Mathematics at Youngstown State University in the United States, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker started the virtual event by explaining what sleep is and why it is so important to sleep. Alicia Prieto Langarica then described what thermoregulation is and how the exterior temperature affects the structure, the quality and the quantity of sleep. The speaker also shared the math model that simulates sleep, which is consistent with experimental data and presents a strong relationship between thermoregulation and the dynamics of sleep. |
| $\begin{array}{r} \text { 10:00 AM } \\ -11: 30 \mathrm{AM} \end{array}$ | JOLGORIO MATEMÁTICO <br> Ven o explorar la actividad interactiven 'Colortendo' con toda ks famillal <br> Fecha: sobado 4 de septiembre de 2021 Mora: $10: 00$ a.m Interibete en: hetps:/ifinyart com jotgoriasat nnown | Thirty-Eighth Math Jamboree <br> The thirty-eighth Math Jamboree took place on Saturday, September 4th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this thirty-eighth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Coloring» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT. |



## SEPTEMBER 2021

| $\begin{gathered} \boldsymbol{1} \boldsymbol{4} \\ \text { 4:00 PM - } \\ \text { 5:00 PM } \end{gathered}$ | CLASE DE ORIGAMI $\qquad$ <br>  $\qquad$ pupelite is om eil Wwirbete th as ithel Arperfanyolt namisyporn911 $\qquad$ | Virtual Origami Class \#53 <br> The Virtual Origami Class \#53 took place on Tuesday, September 14th, 2021 from 4 pm until 5 pm , with the origami artist Matthew Green as our invited speaker. This virtual event was free and open to the general public. <br> For this class, participants needed one $15 \mathrm{~cm} \times 15 \mathrm{~cm}$ paper square. Matthew Green then taught how to fold a penguin, which is a traditional origami model. This origami design is appropriate for 8 -yearolds and above. |
| :---: | :---: | :---: |
| $15$ <br> 5:00 PM - <br> 5:30 PM | TALENTOS OCULTOS <br> Facha: mitencoles 15 de neptiambre de 202 ? Hora: $5: 00 \mathrm{pm}$. $\qquad$ <br> nviluda mpectat Fany benralez, nabematrica panamena | Hidden Figures with Fany Gonzalez <br> Hidden Figures with Fany Gonzalez took place on Wednesday, September 15th, 2021 from 5 pm until 5:30 pm. The special guest of our fourth Facebook Live was Fany Gonzalez, Panamanian math professor. <br> In this Facebook Live, Fany Gonzalez told us about her personal story with mathematics, about her experience as a Panamanian female mathematician and about her favorite memory of a Math Carnival. You can watch the video by visiting our Facebook account: @fundapromat or by clicking here. |
| $\begin{gathered} \text { 12:00 PM - } \\ \text { 1:30 PM } \end{gathered}$ | El Cine como Recurso Didáctico en el Aula de Matemáticas $\qquad$ 400 twhernenting <br>  $\qquad$ | Webinar on Movies as a Teaching Resource in the Math Classroom <br> The Webinar on Movies as a Teaching Resource in the Math Classroom took place on Friday, September 17th, 2021 from 12 pm until 1:30 pm, with Alfonso J. Poblacion, member of the Spanish Mathematical Royal Society (RSME), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker presented several examples about how mathematics has contributed in the development of the movie industry. Alfonso J. Poblacion then shared various movie scenes in which a mathematical reference appears. The speaker also recommended his book "Mathematics in the Movies" and the Facebook page with that same name in Spanish, as well as DivulgaMAT, a portal for the dissemination of mathematics created by the Spanish Mathematical Royal Society (RSME). This virtual event was co-organized with the Spanish Mathematical Royal Society (RSME). |
| $\begin{gathered} 18 \\ 10: 00 \mathrm{AM} \\ -11: 30 \mathrm{AM} \end{gathered}$ |  | Fortieth Math Jamboree <br> The fortieth Math Jamboree took place on Saturday, September 18th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this fortieth Math Jamboree, participants were divided into groups depending on whether they were children or adults and explored the interactive activity entitled "Butterflies" in a collaborative and fun environment. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT. |

## SEPTEMBER 2021



## SEPTEMBER 2021

| $\begin{gathered} \square 5 \\ 10: 00 \mathrm{AM}- \\ 11: 30 \mathrm{AM} \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Ven o eaplorar ta activided interactiva "Pirdmides Numílicas" 68 todo ta familia $\qquad$ <br> Feche: sobado 25 de septiethbre de 202 Wergi $10: 09-6 . m$. insertbete en: httpr: $/ /$ /in iolgorieti | Forty-First Math Jamboree <br> The forty-first Math Jamboree took place on Saturday, September 25th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this forty-first Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Number Pyramids» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Dr. Jeanette Shakalli for designing this activity for FUNDAPROMAT. |
| :---: | :---: | :---: |
| $28$ 4:00 PM - 5:30 PM | CLASE DE ORIGAMI <br>  10254008. Milemes inplis Metericlet: 1 ho frocritlete in el Und: hitp/imoyuhisomintyens | Virtual Origami Class \#54 <br> The Virtual Origami Class \#54 took place on Tuesday, September 28th, 2021 from 4 pm until 5:30 pm, with the origami artist Deanna Kwan as our invited speaker. This virtual event was free and open to the general public. <br> For this class, participants needed three sheets of $8.5 \times 11$ paper, preferrably of three different colors. Deanna Kwan then taught how to fold a telescope, which is an origami model created by Nick Robinson. This origami design is appropriate for 8 -year-olds and above. |
| $30$ 2:00 PM - 3:30 PM | MATEMÁTICAS Y BIG DATA <br> Fechas juwest 30 de septiempre de 2021 Hora: $200 p$. m <br> Invcribete enc httpe:Mimpurl.ccomimate bladata | Webinar on Mathematics and Big Data <br> The Webinar on Mathematics and Big Data took place on Thursday, September 30th, 2021 from 2 pm until 3:30 pm, with Dr. Pablo Groisman, Associate Professor in the Faculty of Exact and Natural Sciences at the University of Buenos Aires in Argentina, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker started the virtual event with interactive questions like "What do a wet stone and a car that drives itself have in common? How about a cat and a shotgun? A person who doesn't lie and the number 999? A wiring and a mathematician? Koningsberg and TikTok? A geometric figure and an equation?" Dr. Pablo Groisman mentioned that we are living through a data revolution and presented on how we can measure distances between points in high dimension in such a way that they reflect the geometry (that we do not know) of the data. The speaker also highlighted in his virtual event Rene Descartes, Pythagoras, Hammersley and Broadbent. |



## OCTOBER 2021



## OCTOBER 2021



| $\begin{gathered} \text { 7:00 PM - } \\ \text { 9:00 PM } \end{gathered}$ | $\square$ $\qquad$ B infully quier $\qquad$ $\qquad$ <br> Décimo Octavo MathsJam Virtual en Panamá $\qquad$ | Eighteenth Virtual MathsJam in Panama <br> The eighteenth Virtual MathsJam in Panama took place on Tuesday, October 19th, 2021 from 7 pm until 9 pm . The MathsJam is a monthly opportunity for math enthusiasts who are 18 years and older to share some quality time with like-minded individuals while solving math puzzles and intellectual challenges in a collaborative environment. <br> This virtual event was free and only for adults. Dr. Jeanette Shakalli, Executive Director of FUNDAPROMAT, acted as the moderator. In this event, participants solved different math challenges using their creativity and imagination. |
| :---: | :---: | :---: |
| $20$ <br> 5:00 PM 5:30 PM | TALENTOS OCULTOS <br> Focha: mipresies 20 de octubre de 2021 Hora: 5.00 pm | Hidden Figures with Zaida Alonzo <br> Hidden Figures with Zaida Alonzo took place on Wednesday, October 20th, 2021 from 5 pm until 5:30 pm. The special guest of our fifth Facebook Live was Zaida Alonzo, Panamanian math professor. <br> In this Facebook Live, Zaida Alonzo told us about her personal story with mathematics, about her experience as a Panamanian female mathematician and about her favorite memory of a Math Carnival. You can watch the video by visiting our Facebook account: @fundapromat or by clicking here. |
| $\begin{gathered} 21 \\ \text { 2:00 PM } \\ \text { 3:00 PM } \end{gathered}$ | Celebration of Mind <br>  | Mime-matics: Celebration of Mind in Panama <br> Mime-matics: Celebration of Mind in Panama took place on Thursday, October 21st, 2021 from 2 pm until 3 pm with the mime-maticians Tim and Tanya Chartier as our invited speakers. This virtual event was free and open to the general public. <br> In this Celebration of Mind in Panama, Tim and Tanya Chartier presented on "Mime-matics." The speakers explained how the invisible world of mime can be used to explore mathematical ideas. Tim and Tanya Chartier used the art of mime to investigate the infinite, weight, the magnitude of force, projectile motion, the remainder, visual spacing and other mathematical concepts. This virtual event was co-organized by the Gathering 4 Gardner Foundation (G4G). |
| $\begin{gathered} ? \\ \text { 12:00 PM } \\ 1: 00 \mathrm{PM} \end{gathered}$ | TURISMO MATEMÁTICO <br> Fecha: vearnes 22 de octulese de 2021 fora: $12: 00 \mathrm{mid}$ <br> Inser ibete efe Hepreininyurlocilunime male | Webinar on Mathematical Tourism <br> The Webinar on Mathematical Tourism took place on Friday, October 22nd, 2021 from 12 pm until 1 pm , with Angel Requena, member of the Spanish Society for the History of Sciences and Techniques (SEHCYT), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker guided us to discover the implicit and hidden mathematics, to confirm the explicit presence of mathematics, to historically link places to mathematicians, to show mathematical objects and instruments, to come closer to mathematical anthropology and ethnography, and to build stories. Angel Requena invited the participants to visit his website https://mateturismo. wordpress.com. The speaker also highlighted that art and life are enjoyed more with mathematics. |

## OCTOBER 2021



| $\begin{gathered} 29 \\ \text { 12:00 PM } \\ 1: 00 \mathrm{PM} \end{gathered}$ | Genética, Arqueología y Un Crimen <br> Fecha: viernes 29 de oclubre de 2021 Mora: 1200 m. <br> . <br> Lxpostery Natalis Joners <br> - | Webinar on Genetics, Archeology and a Crime <br> The Webinar on Genetics, Archeology and a Crime took place on Friday, October 29th, 2021 from 12 pm until 1 pm , with Natalia Jonard, Professor of Mathematics at the National Autonomous University of Mexico (UNAM), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker explained that a graph is a set of points and lines that connect some of the points and defined what the intersection graphs are. Natalia Jonard then described what the interval graphs are and narrated their origin in genetics with Seymour Benzer. The speaker shared that Delvert Ray Fulkerson and Oliver Gross characterized the interval graphs using matrices, a result that was applied by David Kendall to solve problems in archeology and by Joel Ephraim Cohen to study the ecosystems. Natalia Jonard also presented how we can use mathematics to solve the murder of the Duke of Densmore. |
| :---: | :---: | :---: |
| $\begin{gathered} ? \bigcirc \\ \text { 5:00 PM }- \\ \text { 6:00 PM } \end{gathered}$ | Estrategias Didácticas para Preescolar - Parte 2 Fechac viernes 212 de gctubie de 2021 Wetrianbe giatiar <br>  Interibete en: Nisesinfral presorsim? $\qquad$ AMME 으늘 $\qquad$ $\qquad$ | Webinar on Teaching Strategies for Preschool - Part 2 <br> The Webinar on Teaching Strategies for Preschool - Part 2 took place on Friday, October 29th, 2021 from 5 pm until 6 pm , with Mayra Rojano, teacher in the Tlaxcala Preschool Normal School in Mexico and member of the Mexican Association of Educational Mathematics (AMME), as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker reviewed the classification of the teaching material in structured and non-structured and shared the four elements that an educational puzzle must have in the classroom. Mayra Rojano showed an activity with chromatic tubes increasing the degrees of difficulty, explained Cuban dominoes, and performed an activity of counting and following the rhythm with the Letkiss melody. The speaker also highlighted that games serve as an instructional strategy in the classroom. This virtual event was co-organized with the Mexican Association of Educational Mathematics (AMME). |
| $\begin{gathered} 3 \Omega \\ 10: 00 \mathrm{AM}- \\ 11: 30 \mathrm{AM} \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Ven a inplerar ta ectividod interactiva <br>  RUNDMPRONT | Forty-Sixth Math Jamboree <br> The forty-sixth Math Jamboree took place on Saturday, October 30th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this forty-sixth Math Jamboree, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Anagrams» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Andrea Zablotsky for designing this activity for FUNDAPROMAT. |

## NOVEMBER 2021




# NOVEMBER 2021 




## DECEMBER 2021




## DECEMBER 2021

| $\begin{gathered} \text { 12:00 PM }- \\ \text { 1:00 PM } \end{gathered}$ | EnCUENTRO VIRTUAL CON MATEMATICOS SOBRESAUENTES | Twenty-Ninth Virtual Encounter with Outstanding Mathematicians <br> The twenty-ninth Virtual Encounter with Outstanding Mathematicians took place on Friday, December 10th, 2021 from 12 pm until 1 pm . Dr. Constanza Rojas-Molina, Professor of Mathematics at the CY Cergy Paris University, was our invited speaker. This virtual event was free and open to the general public. <br> On this twenty-ninth Encounter, Dr. Constanza Rojas-Molina shared anecdotes of her personal life and her professional journey as a female mathematician. The speaker also presented on "Drawing Mathematics," in which she explored the visual aspect of mathematics and highlighted that drawing is an essential part of the development of math ideas. The speaker also described the advantages of taking visual notes and encouraged the audience to participate in the drawing challenge for the math podcast in Spanish «Démosle Vuelta... Mate con Café» on YouTube. |
| :---: | :---: | :---: |
| $\begin{gathered} 11 \\ 10: 00 \mathrm{AM}- \\ 11: 30 \mathrm{AM} \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Von o eoptorar la actividod interactiva Celcwledara hota' con toda tu famitial <br> Feche: sebado 11 de diciembre do 2021 Hora! 10:00 a.m tescribate en: httpai/tiayual. som/ joigerios 1 | Math Jamboree \#51 <br> The Math Jamboree \#51 took place on Saturday, December 11th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this Math Jamboree \#51, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Broken Calculator» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Camila Espinoza for designing this activity for FUNDAPROMAT. |
| 3:00 PM 4:00 PM | Visita al Hogar San José de Malambo <br> il pasado 11 se diciember resid ramas in talier st <br> nolematicas diertides coo or igenev en enlo abergep <br> es Aray in pue brinca iteocion a nillas y asoieneintes <br> ene wiloer acilh de wit derpeliet | Visit to the San Jose of Malambo Shelter <br> On Saturday, December 11th, 2021 from 3 pm until 4 pm we ran a fun math workshop with origami at the San Jose of Malambo Shelter in Arraijan, which is a shelter that provides care to girls and adolescents in violation of their rights. |
| $14$ | CLASE DE ORIGAMI <br>  <br>  <br>  <br>  <br>  <br>  | Virtual Origami Class \#62 <br> The Virtual Origami Class \#62 took place on Tuesday, December 14th, 2021 from 4 pm until 5 pm , with the origami artist Aronny Pivaral as our invited speaker. This virtual event was free and open to the general public. <br> For this class, participants needed one $15 \mathrm{~cm} \times 15 \mathrm{~cm}$ paper square. Aronny Pivaral then taught how to fold a Christmas stocking, which is a traditional origami model. This origami design is appropriate for 8 -year-olds and above. |
| $\begin{gathered} \text { 4:00 PM - } \\ \text { 5:00 PM } \end{gathered}$ |  |  |


| $\begin{gathered} 15 \\ \text { 12:00 PM } \\ 1: 00 \mathrm{PM} \end{gathered}$ | Date: Wedtesdoy December 15 th, 2021 Time: 12 ph Fanema. 12 pm ESS fegister at: cube"sydnty | Tenth Rubik's Cube Webinar <br> The tenth Rubik's Cube Webinar took place on Wednesday, December 15th, 2021 from 12 pm until 1 pm , with the professional speedcuber Sydney Weaver from the United States as our invited speaker. This virtual event was free and open to the general public. <br> On this tenth Webinar, the speaker defined the notation that speedcubers use. Sydney Weaver then explained step by step the algorithms that make up the beginners method to solve the Rubik's Cube and shared some recommendations on how to improve the time of resolution of this math puzzle. You can watch the speaker on Penn and Teller: Fool Us here. |
| :---: | :---: | :---: |
| $\begin{gathered} \text { 2:00 PM - } \\ \text { 3:00 PM } \end{gathered}$ | Rompecabezas Matemáticos con Dominó <br> Fecha: juwes is de dicientire da 2021 Hora: 2:00 pm <br> Inseribeste en: hupermingurleon/maso doming | Webinar on Math Puzzles with Dominoes <br> The Webinar on Math Puzzles with Dominoes took place on Thursday, December 16th, 2021 from 2 pm until 3 pm, with Astryd Banesa Estrada, math teacher in Guatemala and volunteer of the Latin American Educational Math Club, as our invited speaker. This virtual event was free and open to the general public. <br> The invited speaker described the benefits of using math puzzles, including to develop concentration, to improve visual memory, to stimulate spatial ability, among others. Astryd Banesa Estrada then shared several math puzzles with dominoes and recommended the website https://mathigon.org. |
| $\begin{gathered} 18 \\ 10: 00 \mathrm{AM} \\ -11: 30 \mathrm{AM} \end{gathered}$ | JOLGORIO MATEMÁTICO <br> Ven a seplorar la ectividod interactiva 'Ardillas y Nueces" con toga te familial Mrdillas y Nutes con toda tie familial Fecha: scbede ts es <br> Ascikmbre ite 2021 Heras $10: 00$ a.m. <br> intcribete en: <br> hitps:intinyurt com? loleotios? <br> stgotios2 | Math Jamboree \#52 <br> The Math Jamboree \#52 took place on Saturday, December 18th, 2021 from 10 am until 11:30 am. A Jamboree is a joyful and loud celebration or party. The Math Jamboree is a weekly opportunity for the entire family to enjoy exploring the beauty and richness of mathematics by sharing their ideas on the recreational activities that we present during the virtual event. <br> In this Math Jamboree \#52, participants were separated into groups depending on whether they are kids or adults and explored the interactive activity called «Squirrels and Nuts» in an environment of collaboration and a lot of fun. This virtual event was free and open to the general public. We thank Marleny Vargas and Romina Busain for designing this activity for FUNDAPROMAT. |

